

### Table of Contents: HIV/AIDS Statistics of Persons Diagnosed in Michigan

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## General HIV

### AIDS (Acquired Immune Deficiency Syndrome)

Diagnosis with any one of 26 different opportunistic illnesses which are indicative of a severe immune deficiency, or a laboratory test demonstrating severe immune deficiency (i.e. CD4 count <200 or CD4 percent <14%)

### Case Definitions for HIV and AIDS

Standard definitions used by all states. Specific information is required in order to count a case of HIV infection or AIDS, including a method to uniquely identify an individual. Each person is counted as either HIV infected without AIDS or HIV infected with AIDS. Once a person meets the AIDS case definition, this person is always counted as an AIDS case, even if his/her health improves.

### HAART

Highly Active Antiretroviral Therapy

### HIV (Human Immunodeficiency Virus)

Diagnosis with HIV by positive HIV screening and confirmatory test or positive result or detectable quantity on virologic test

### Pediatric Cases

Children < 13 years at the time of diagnosis

## Epidemiology Terms

### Epidemiology

The study of the distribution, determinates, and frequency of disease in humans.

### GIS (Geographic Information System)

The display and analysis of geographic data in map format.

### Incidence

Number of persons who become infected with a disease in a certain period of time, usually a year.

### New Diagnoses

Number of cases newly diagnosed over a given period of time, usually a year. In HIV surveillance, new diagnoses do not necessarily represent new infections, as newly diagnosed cases may have been infected for many years. Thus, only some newly diagnosed cases are also incident cases.

### Prevalence

Total number of persons currently living with a disease at one point in time. See page iii for a description of estimated prevalence in Michigan.

### Public Health Surveillance

The ongoing collection, analysis, interpretation, dissemination, and evaluation of population-based information about persons with a condition or risk factor of public health concern.

### Rate

Count of infected cases divided by the number of persons in the population (infected and uninfected). This calculation is multiplied by a multiple of 10, usually 1,000 or 100,000. Allows one to weigh the relationship between prevalence or number of new diagnoses and population.

## Administrative Info

### CDC

U.S. Centers for Disease Control and Prevention

### eHARS (HIV/AIDS Reporting System)

A standardized database developed by CDC for national reporting of HIV/AIDS

### HAPIS

HIV/AIDS Prevention and Intervention Section

### MDCH

Michigan Department of Community Health

## Michigan HIV Surveillance Activities

### Core HIV Surveillance

Population-based surveillance system of diagnosed adult, adolescent, and pediatric HIV/AIDS cases.

### MMP (Medical Monitoring Project)

Project providing information on needs, risk behaviors, barriers to utilization of services, and quality of care, as well as other data, among HIV-positive persons in care in Michigan.

*Michigan MMP Coordinator, Meosia Lee-Turner. Call (313) 876-0117*

### NHBS (National HIV Behavioral Surveillance)

Surveillance system to monitor selected behaviors and access to prevention services among groups of uninfected persons at highest risk for HIV infection: MSM, IDU, and Heterosexuals Living in High Risk Areas.

*Michigan NHBS Coordinator, Emily Higgins (313) 876-0176*

### STARHS (Serologic Testing Algorithm for Recent HIV Seroconversion)

HIV Incidence Surveillance that will enable estimation of new HIV infections in Michigan.

*Michigan STARHS Coordinator, Marianne O'Connor (313) 876-0854*

### VARHS (Variant, Atypical, and Resistant HIV Surveillance)

Surveillance of drug-resistant and sub-type HIV strains using viral genotyping of remnant sera.

*Michigan VARHS Coordinator, Mary-Grace Brandt (313) 876-4115*

## Risk & Exposure Categories

### Blood Recipient

All hemophiliacs, blood transfusion recipients, and organ recipients who received blood products prior to 1985 and all persons documented to have ever received an infected organ or unit of blood

### Heterosexual

#### *HRH (High Risk Heterosexuals)*

Males and females whose sexual partners are known to be HIV-infected or at high risk for HIV. The partners meet one of the following criteria: a history of sexual contact with bisexual males (for females), IDU, hemophiliacs, HIV+ transfusion recipients, or other HIV+ persons of unknown risk

#### *PH (Presumed Heterosexual)-Female*

Females whose only documented risk is heterosexual contact, and their male partners' risk and HIV status is unknown

### IDU (Injection Drug User)

Persons who have a history of injecting drugs

### Perinatal

HIV transmission from mother to child during birth or through breastfeeding.

### MSM (Men who have sex with men)

Males who have a history of sexual contact with other men or with both men and women

#### *MSM & Sex with Female (not HRH)*

Males who have a history of sexual contact with other men and women, however, they do not know the risk of their female partner.

### MSM/IDU

MSM who also have a history of injecting drugs

### Behaviorally Bisexual Men

MSM who also have a history of sexual contact with a woman.

### Undetermined

#### *PH (Presumed Heterosexual)-Male*

Males whose only documented risk is heterosexual contact, and their female partners' risk and HIV status is unknown

#### *Unknown*

Males and females with no identified risk

## Risk Transmission and Exposure Categories

### Risk Transmission Categories

Risk transmission categories are the hierarchical risk categories that have been used for displaying HIV transmission risk in the Michigan and national HIV/AIDS statistics since the 1980's. When the transmission categories were created, the order from top to bottom was meant to represent the most likely route through which HIV was transmitted, and thus implies that some modes of transmission are more efficient than others. The hierarchy was established based on what was known at the beginning of the epidemic about how HIV was transmitted, when almost all cases were among men and there was little documented heterosexual transmission. Since then, the hierarchy has not changed appreciably even though our understanding of the most efficient HIV transmission routes has changed.

### Background on Hierarchy

The hierarchy algorithm is calculated using data provided on the case report form on the individual risk factor questions. In this hierarchy, all cases are assigned a single mode of transmission, with the exception of men who have reported sex with other men as well as injection of drugs. These men are categorized as Men who Have Sex with Men/Injection Drug Users (MSM/IDU). Over time, concerns have been raised that use of hierarchical categories masks the identification of cases with multiple risks. For example, consider a woman whose risk is documented as both injecting drugs and sex with a male partner who has injected drugs. This case would be assigned a risk of injecting drug use (IDU), rather than both IDU + HRH category, because the IDU category is ranked higher in the risk hierarchy than the high-risk heterosexual (HRH) category. Therefore, this woman's risk of HRH would not be represented.

There is a national effort toward representing mode of HIV transmission more comprehensively. However, the use of "multiple risk" or "combination risk" categories has not yet been implemented nationally, partly because many organizations that use HIV surveillance data still rely on the traditional transmission categories. Beginning in January 2009, Michigan will present data on mode of transmission in two ways. The traditional risk categories will continue to be used in the same tables in which they previously appeared. In addition, a new table (Table 2 on page 2) will display Exposure Categories, which will present mode of transmission in a manner that allows more complete presentation of the reported risk factor information.

### Exposure Categories

The 'Exposure Categories' shown on page 2 convey all risks that a person is documented to have engaged in that could have exposed him or her to HIV. Like the traditional risk hierarchy categories, the Exposure Categories are mutually exclusive, meaning that each person is only included in one category. However, the categories, as presented, allow readers to see all the ways in which a person may have been infected with HIV and, with the exception of undetermined risk, are displayed in decreasing order of frequency. In order to display the most accurate information possible, we request that persons who fill out case report forms complete a 'Yes', 'No' or 'Unknown' answer to all the risk factor questions in Section VII Patient History.

## HIV Surveillance in Michigan

### Background

Reports of HIV infection and AIDS are submitted to state and local health departments under Michigan law by providers making the diagnoses or treating previously diagnosed persons. In addition, MDCH implemented PA 514 in April 2005, requiring laboratories to report HIV test results. The addition of laboratory reporting to the HIV surveillance system increased the case reports received and improved reporting completeness. Anonymous HIV reports (without name or other identifier) are excluded from this report because we cannot estimate duplication, update status, or obtain missing data. A total of 2,002 complete anonymous reports have been reported in Michigan.

# HIV Surveillance in Michigan (Continued)

## HIV Prevalence Estimates for Michigan

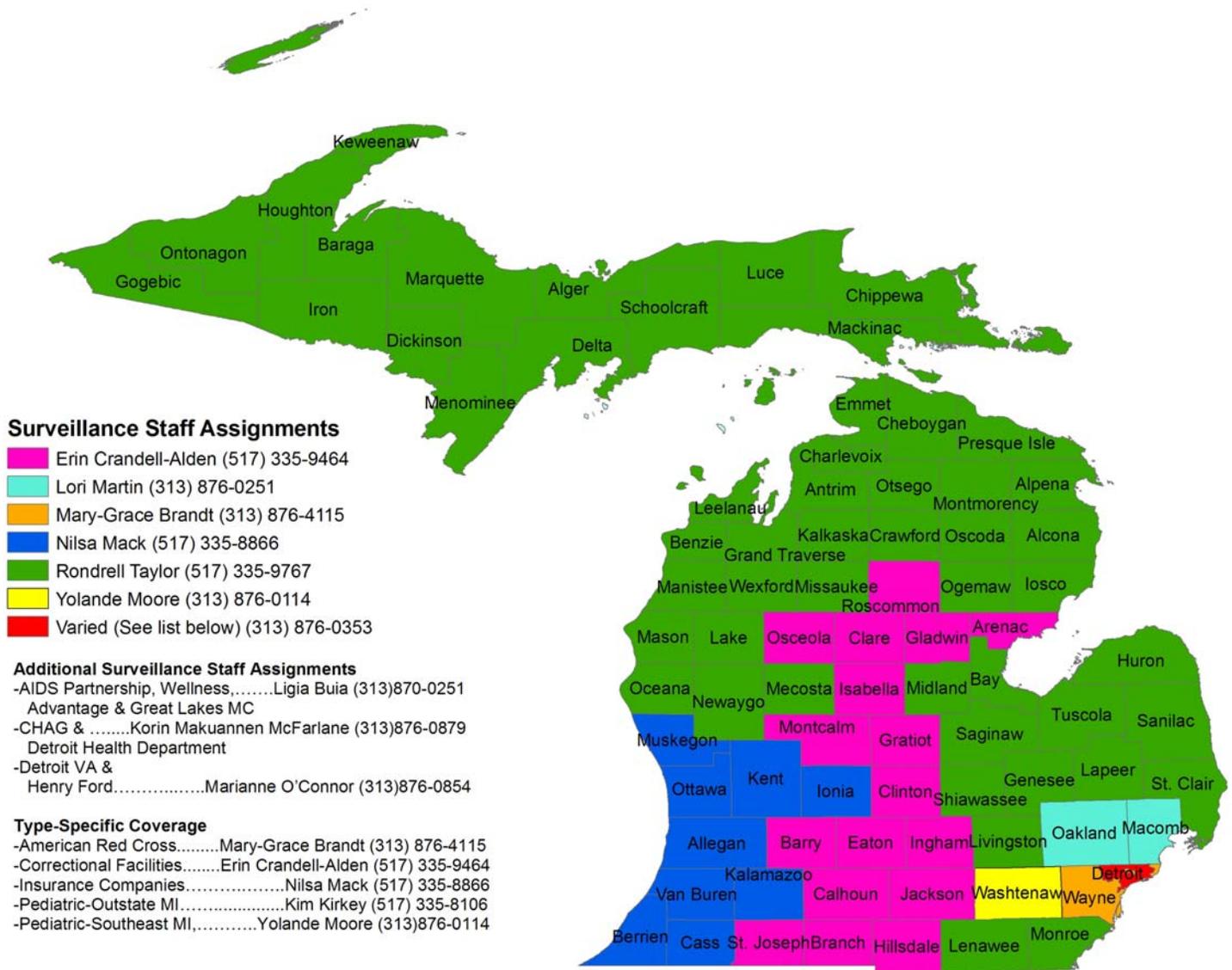
HIV prevalence estimates in this report are updated annually in the January edition of this quarterly analysis. These estimates are based on adding the following three components and rounding: 1) the number of reported cases living with HIV/AIDS, 2) the number of known HIV+ cases not yet reported, estimated at 10 percent of the reported living HIV/AIDS cases, and 3) the number of HIV+ cases that have not yet been tested, estimated at 21 percent of the total cases living with HIV/AIDS (identical to the CDC estimate).

Categorical estimates of HIV infection are calculated from the distribution of reported cases among each group of confidentially-reported persons living with HIV or AIDS. The proportion of total cases is multiplied by 19,500. For example, 77 percent of combined HIV and AIDS reports are among men. Therefore, the number of HIV-infected men in Michigan is estimated to be 15,090 (77.38% X 19,500). Since the estimates are rounded to the nearest 10, totals may not equal 19,500. The minimum estimate is 10.

Prison estimates of HIV infection are calculated differently than the above mentioned categorical estimates. Because all prisoners are tested for HIV upon entry to prison, there is no need to apply estimates to account for unreported and untested cases to the reported prison cases. Therefore, the prison prevalence estimate is calculated by rounding the reported number of persons living with HIV/AIDS who were diagnosed in prison to the nearest 10.

County estimates of HIV infection are calculated similarly to the categorical estimates; however, for county calculations the proportion of cases in a particular county is multiplied by the statewide estimate minus the prison estimate (19,500 - 760 = 18,740). For example, 12 percent of HIV/AIDS cases (not including prison and cases with unknown residence) were living in Oakland county at diagnosis. Therefore, the number of HIV-infected persons who were living in Oakland county at the time of diagnosis is estimated to be 2,254 (12.03% x 18,740). Since the estimates are rounded to the nearest 10, the county totals may not equal 18,740. The method of calculating prevalence estimates for county of residence was revised as of April 2008, and thus county estimates presented prior to this date may differ from current and future estimates.

## HIV Surveillance Staff Contacts



**TABLE 1. Demographic Information on Prevalent HIV/AIDS Cases**

|   | <i>EST<br/>PREV*</i> | <i>REPORTED PREVALENCE</i> |                |               |                |               |                | <i>CENSUS 2008<br/>ESTIMATES</i> |                        |
|---|----------------------|----------------------------|----------------|---------------|----------------|---------------|----------------|----------------------------------|------------------------|
|   |                      | <i>HIV, not AIDS</i>       |                | <i>AIDS</i>   |                | <i>Total</i>  |                | <i>Rate per<br/>100,000†</i>     |                        |
|   | <i>Number</i>        | <i>Number</i>              | <i>Percent</i> | <i>Number</i> | <i>Percent</i> | <i>Number</i> | <i>Percent</i> | <i>Number</i>                    | <i>Percent</i>         |
| <b><i>RACE/ETHNICITY§</i></b>                 |                      |                            |                |               |                |               |                |                                  |                        |
| White   | 6,700                | 2,361                      | 34%            | 2,760         | 34%            | 5,121         | 34%            | 66                               | 7,750,818 77%          |
| Black   | 11,510               | 4,050                      | 59%            | 4,744         | 59%            | 8,794         | 59%            | 627                              | 1,403,051 14%          |
| Hispanic                                      | 810                  | 268                        | 4%             | 351           | 4%             | 619           | 4%             | 150                              | 413,827 4%             |
| Asian/PI                                      | 100                  | 34                         | 0%             | 39            | 0%             | 73            | 0%             | 31                               | 236,236 2%             |
| Am Indian/AN                                  | 50                   | 24                         | 0%             | 17            | 0%             | 41            | 0%             | 75                               | 54,714 1%              |
| Multi/Unk/Other                               | 320                  | 109                        | 2%             | 138           | 2%             | 247           | 2%             | N/A                              | 144,776 1%             |
| <b><i>SEX &amp; RACE</i></b>                  |                      |                            |                |               |                |               |                |                                  |                        |
| Males   | 15,090               | 5,150                      | 75%            | 6,375         | 79%            | 11,525        | 77%            | 234                              | 4,923,929 49%          |
| <i>White Males</i>                            | 5,860                | 2,005                      | 29%            | 2,472         | 31%            | 4,477         | 30%            | 117                              | 3,825,990 38%          |
| <i>Black Males</i>                            | 8,250                | 2,828                      | 41%            | 3,474         | 43%            | 6,302         | 42%            | 951                              | 662,992 7%             |
| <i>Hispanic Males</i>                         | 630                  | 202                        | 3%             | 280           | 3%             | 482           | 3%             | 221                              | 217,942 2%             |
| <i>Other Males</i>                            | 350                  | 115                        | 2%             | 149           | 2%             | 264           | 2%             | 122                              | 217,005 2%             |
| Females                                       | 4,410                | 1,696                      | 25%            | 1,674         | 21%            | 3,370         | 23%            | 66                               | 5,079,493 51%          |
| <i>White Females</i>                          | 840                  | 356                        | 5%             | 288           | 4%             | 644           | 4%             | 16                               | 3,924,828 39%          |
| <i>Black Females</i>                          | 3,260                | 1,222                      | 18%            | 1,270         | 16%            | 2,492         | 17%            | 337                              | 740,059 7%             |
| <i>Hispanic Fms</i>                           | 180                  | 66                         | 1%             | 71            | 1%             | 137           | 1%             | 70                               | 195,885 2%             |
| <i>Other Females</i>                          | 130                  | 52                         | 1%             | 45            | 1%             | 97            | 1%             | 44                               | 218,721 2%             |
| <b><i>RISK*</i></b>                           |                      |                            |                |               |                |               |                |                                  |                        |
| Male-Male Sex                                 | 9,330                | 3,181                      | 46%            | 3,948         | 49%            | 7,129         | 48%            | N/A                              | N/A N/A                |
| Injection Drug Use                            | 2,110                | 629                        | 9%             | 985           | 12%            | 1,614         | 11%            | N/A                              | N/A N/A                |
| MSM/IDU                                       | 850                  | 266                        | 4%             | 383           | 5%             | 649           | 4%             | N/A                              | N/A N/A                |
| Blood Products                                | 130                  | 34                         | 0%             | 62            | 1%             | 96            | 1%             | N/A                              | N/A N/A                |
| Heterosexual                                  | 3,470                | 1,279                      | 19%            | 1,368         | 17%            | 2,647         | 18%            | N/A                              | N/A N/A                |
| <i>HRH</i>                                    | 2,400                | 820                        | 12%            | 1,011         | 13%            | 1,831         | 12%            | N/A                              | N/A N/A                |
| <i>PH-Female</i>                              | 1,070                | 459                        | 7%             | 357           | 4%             | 816           | 5%             | N/A                              | N/A N/A                |
| Perinatal                                     | 210                  | 105                        | 2%             | 55            | 1%             | 160           | 1%             | N/A                              | N/A N/A                |
| Undetermined                                  | 3,400                | 1,352                      | 20%            | 1,248         | 16%            | 2,600         | 17%            | N/A                              | N/A N/A                |
| <i>PH-Male</i>                                | 1,790                | 596                        | 9%             | 775           | 10%            | 1,371         | 9%             | N/A                              | N/A N/A                |
| <i>Unknown</i>                                | 1,610                | 756                        | 11%            | 473           | 6%             | 1,229         | 8%             | N/A                              | N/A N/A                |
| <b><i>AGE AT HIV DIAGNOSIS</i></b>            |                      |                            |                |               |                |               |                |                                  |                        |
| 0 - 12 years                                  | 240                  | 119                        | 2%             | 65            | 1%             | 184           | 1%             | N/A                              | N/A N/A                |
| 13 - 19 years                                 | 920                  | 427                        | 6%             | 272           | 3%             | 699           | 5%             | N/A                              | N/A N/A                |
| 20 - 24 years                                 | 2,550                | 1,102                      | 16%            | 847           | 11%            | 1,949         | 13%            | N/A                              | N/A N/A                |
| 25 - 29 years                                 | 3,210                | 1,200                      | 17%            | 1,250         | 16%            | 2,450         | 16%            | N/A                              | N/A N/A                |
| 30 - 39 years                                 | 6,790                | 2,170                      | 32%            | 3,017         | 37%            | 5,187         | 35%            | N/A                              | N/A N/A                |
| 40 - 49 years                                 | 4,110                | 1,297                      | 19%            | 1,842         | 23%            | 3,139         | 21%            | N/A                              | N/A N/A                |
| 50 - 59 years                                 | 1,370                | 434                        | 6%             | 609           | 8%             | 1,043         | 7%             | N/A                              | N/A N/A                |
| 60 years and over                             | 320                  | 94                         | 1%             | 147           | 2%             | 241           | 2%             | N/A                              | N/A N/A                |
| Unspecified                                   | 10                   | 3                          | 0%             | 0             | 0%             | 3             | 0%             | N/A                              | N/A N/A                |
| <b><i>AREA OF RESIDENCE AT DIAGNOSIS*</i></b> |                      |                            |                |               |                |               |                |                                  |                        |
| Detroit Metro                                 | 12,850               | 4,376                      | 64%            | 5,320         | 66%            | 9,696         | 65%            | 221                              | 4,395,484 44%          |
| Out-State                                     | 5,850                | 2,094                      | 31%            | 2,320         | 29%            | 4,414         | 30%            | 79                               | 5,607,938 56%          |
| Prison/Unknown                                | 800                  | 376                        | 5%             | 409           | 5%             | 785           | 5%             | N/A                              | N/A N/A                |
| <b>TOTAL</b>                                  | <b>19,500</b>        | <b>6,846</b>               | <b>100%</b>    | <b>8,049</b>  | <b>100%</b>    | <b>14,895</b> | <b>100%</b>    | <b>149</b>                       | <b>10,003,422 100%</b> |

\*See pages i and ii for descriptions of prevalence estimate calculations and risk category groupings. Risk categories used in Michigan are newly defined as of the July 2007 quarter.

† To calculate "1 out x" statements for rate, divide the census number by the total reported prevalence. For example, for non-Hispanic whites: 7,750,818 / 5,121 = 1,510. Thus, 1 out of every 1,510 non-Hispanic white persons in Michigan are living with HIV.

§ In this report, persons described as white, black, Asian/Pacific Islander (PI), or American Indian/Alaska Native (AN) are all non-Hispanic; persons described as Hispanic might be of any race.

\* Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area.

**TABLE 2. Risk Transmission\* and Exposure Categories\* for HIV on Prevalent HIV/AIDS Cases, by Sex**

|   | <b>REPORTED HIV/AIDS PREVALENCE</b> |                |                |                |               |                |
|---|-------------------------------------|----------------|----------------|----------------|---------------|----------------|
|   | <b>Males</b>                        |                | <b>Females</b> |                | <b>Total</b>  |                |
|   | <b>Number</b>                       | <b>Percent</b> | <b>Number</b>  | <b>Percent</b> | <b>Number</b> | <b>Percent</b> |
| <b>RISK TRANSMISSION CATEGORIES (CDC Hierarchy)<sup>§</sup></b>                     |                                     |                |                |                |               |                |
| <b>(Mutually Exclusive: one case is represented in ONLY one category)</b>           |                                     |                |                |                |               |                |
| Male-Male Sex   | 7,129                               | 62%            | N/A            | --             | 7,129         | 48%            |
| Injection Drug Use  | 959                                 | 8%             | 655            | 19%            | 1,614         | 11%            |
| MSM/IDU   | 649                                 | 6%             | N/A            | --             | 649           | 4%             |
| Blood Products  | 82                                  | 1%             | 14             | 0%             | 96            | 1%             |
| Heterosexual  | 533                                 | 5%             | 2,114          | 63%            | 2,647         | 18%            |
| HRH   | 533                                 | 5%             | 1,298          | 39%            | 1,831         | 12%            |
| PH-Female   | N/A                                 | --             | 816            | 24%            | 816           | 5%             |
| Perinatal   | 92                                  | 1%             | 68             | 2%             | 160           | 1%             |
| Undetermined  | 2,081                               | 18%            | 519            | 15%            | 2,600         | 17%            |
| PH-Male   | 1,371                               | 12%            | N/A            | --             | 1,371         | 9%             |
| Unknown   | 710                                 | 6%             | 519            | 15%            | 1,229         | 8%             |
| <b>EXPOSURE CATEGORIES<sup>†</sup></b>  |                                     |                |                |                |               |                |
| <b>(Mutually Exclusive: one case is represented in ONLY one category)</b>           |                                     |                |                |                |               |                |
| Male-Male Sex   | 6,627                               | 58%            | N/A            | --             | 6,627         | 44%            |
| MSM - ONLY  | 4,522                               | 39%            | N/A            | --             | 4,522         | 30%            |
| MSM & Sex with Female (not HRH)   | 2,105                               | 18%            | N/A            | --             | 2,105         | 14%            |
| MSM & HRH   | 498                                 | 4%             | N/A            | --             | 498           | 3%             |
| MSM & IDU   | 451                                 | 4%             | N/A            | --             | 451           | 3%             |
| MSM & IDU & HRH   | 198                                 | 2%             | N/A            | --             | 198           | 1%             |
| MSM & Blood Products  | 4                                   | 0%             | N/A            | --             | 4             | 0%             |
| Heterosexual - ONLY   | 533                                 | 5%             | 2,114          | 63%            | 2,647         | 18%            |
| HRH   | 533                                 | 5%             | 1,298          | 39%            | 1,831         | 12%            |
| PH-Female   | N/A                                 | --             | 816            | 24%            | 816           | 5%             |
| HRH & IDU   | 375                                 | 3%             | 360            | 11%            | 735           | 5%             |
| Injection Drug Use - ONLY   | 579                                 | 5%             | 291            | 9%             | 870           | 6%             |
| IDU & Blood Products  | 5                                   | 0%             | 4              | 0%             | 9             | 0%             |
| Perinatal Exposure  | 92                                  | 1%             | 69             | 2%             | 161           | 1%             |
| Exposure to Blood Products - ONLY   | 82                                  | 1%             | 14             | 0%             | 96            | 1%             |
| Undetermined  | 2,081                               | 18%            | 518            | 15%            | 2,599         | 17%            |
| PH-Male Only  | 1,371                               | 12%            | N/A            | --             | 1,371         | 9%             |
| Unknown   | 710                                 | 6%             | 518            | 15%            | 1,228         | 8%             |
| <b>TOTAL</b>  | <b>11,525</b>                       | <b>100%</b>    | <b>3,370</b>   | <b>100%</b>    | <b>14,895</b> | <b>100%</b>    |
| <b>SUMMARIZED EXPOSURE CATEGORIES<sup>*</sup></b>                                   |                                     |                |                |                |               |                |
| <b>(NOT Mutually Exclusive: one case can be represented in multiple categories)</b> |                                     |                |                |                |               |                |
| Any MSM   | 7,778                               | 67%            | N/A            | --             | 7,778         | 52%            |
| Behaviorally Bisexual Men   | 2,801                               | 24%            | N/A            | --             | 2,801         | 19%            |
| Any Heterosexual  | 3,709                               | 32%            | 2,474          | 73%            | 6,183         | 42%            |
| Any HRH   | 1,604                               | 14%            | 1,658          | 49%            | 3,262         | 22%            |
| Any IDU   | 1,608                               | 14%            | 655            | 19%            | 2,263         | 15%            |

\*See page ii for descriptions of risk category groupings.

§ Risk categories are grouped based on hierarchical categories as set by the CDC. Any one person with multiple risks may only be represented in the highest category (based on the hierarchical algorithm).

† Exposure Categories are mutually exclusive and grouped by allowing all possible combinations of risks that any one person may have. Any one person may have any combination of risks and is not assigned to a single risk category, as in the hierarchical groupings.

\*These groups presented are NOT mutually exclusive, meaning a case can be represented in multiple groupings. These summarized categories are meant to give a broader picture of the exposure categories and will NOT add up to the overall total number of persons living with HIV/AIDS.

**TABLE 3. Sex, Race, and Risk Among Prevalent HIV/AIDS Cases**

| <b>MALES</b>         | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Male Subtotal</b> |             |
|----------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|----------------------|-------------|
| Male-Male sex        | 3,342        | 75%        | 3,374        | 54%        | 264             | 55%       | 149                     | 56%       | 7,129                | 62%         |
| Injecting Drug Use   | 183          | 4%         | 709          | 11%        | 53              | 11%       | 14                      | 5%        | 959                  | 8%          |
| Male-Male Sex/IDU    | 253          | 6%         | 360          | 6%         | 15              | 3%        | 21                      | 8%        | 649                  | 6%          |
| Blood Products       | 64           | 1%         | 15           | 0%         | 1               | 0%        | 2                       | 1%        | 82                   | 1%          |
| Heterosexual*        | 102          | 2%         | 388          | 6%         | 36              | 7%        | 7                       | 3%        | 533                  | 5%          |
| Perinatal            | 16           | 0%         | 68           | 1%         | 2               | 0%        | 6                       | 2%        | 92                   | 1%          |
| Undetermined         | 517          | 12%        | 1,388        | 22%        | 111             | 23%       | 65                      | 25%       | 2,081                | 18%         |
| <i>PH-Male</i>       | 300          | 7%         | 948          | 15%        | 81              | 17%       | 42                      | 16%       | 1,371                | 12%         |
| <i>Unknown</i>       | 217          | 5%         | 440          | 7%         | 30              | 6%        | 23                      | 9%        | 710                  | 6%          |
| <b>Male Subtotal</b> | <b>4,477</b> | <b>39%</b> | <b>6,302</b> | <b>55%</b> | <b>482</b>      | <b>4%</b> | <b>264</b>              | <b>2%</b> | <b>11,525</b>        | <b>100%</b> |

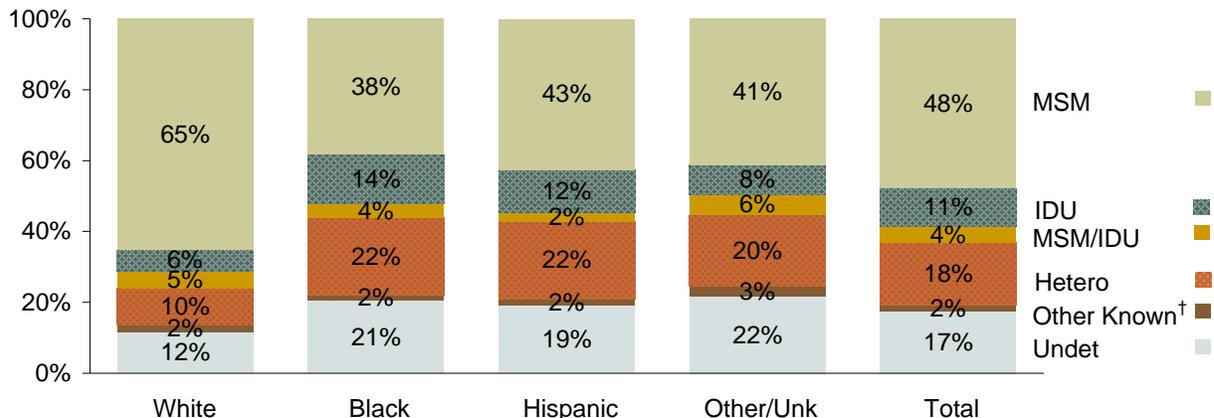
| <b>FEMALES</b>         | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Female Subtotal</b> |             |
|------------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|------------------------|-------------|
| Injecting Drug Use     | 115          | 18%        | 502          | 20%        | 22              | 16%       | 16                      | 16%       | 655                    | 19%         |
| Blood Products         | 9            | 1%         | 4            | 0%         | 1               | 1%        | 0                       | 0%        | 14                     | 0%          |
| Heterosexual           | 426          | 66%        | 1,523        | 61%        | 100             | 73%       | 65                      | 67%       | 2,114                  | 63%         |
| <i>HRH</i>             | 315          | 49%        | 873          | 35%        | 74              | 54%       | 36                      | 37%       | 1,298                  | 39%         |
| <i>PH-Female</i>       | 111          | 17%        | 650          | 26%        | 26              | 19%       | 29                      | 30%       | 816                    | 24%         |
| Perinatal              | 12           | 2%         | 47           | 2%         | 6               | 4%        | 3                       | 3%        | 68                     | 2%          |
| Undetermined*          | 82           | 13%        | 416          | 17%        | 8               | 6%        | 13                      | 13%       | 519                    | 15%         |
| <b>Female Subtotal</b> | <b>644</b>   | <b>19%</b> | <b>2,492</b> | <b>74%</b> | <b>137</b>      | <b>4%</b> | <b>97</b>               | <b>3%</b> | <b>3,370</b>           | <b>100%</b> |

| <b>TOTAL</b>       | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Risk Total</b> |             |
|--------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|-------------------|-------------|
| Male-Male sex      | 3,342        | 65%        | 3,374        | 38%        | 264             | 43%       | 149                     | 41%       | 7,129             | 48%         |
| Injecting Drug Use | 298          | 6%         | 1,211        | 14%        | 75              | 12%       | 30                      | 8%        | 1,614             | 11%         |
| Male-Male Sex/IDU  | 253          | 5%         | 360          | 4%         | 15              | 2%        | 21                      | 6%        | 649               | 4%          |
| Blood Products     | 73           | 1%         | 19           | 0%         | 2               | 0%        | 2                       | 1%        | 96                | 1%          |
| Heterosexual       | 528          | 10%        | 1,911        | 22%        | 136             | 22%       | 72                      | 20%       | 2,647             | 18%         |
| <i>HRH</i>         | 417          | 8%         | 1,261        | 14%        | 110             | 18%       | 43                      | 12%       | 1,831             | 12%         |
| <i>PH-Female</i>   | 111          | 2%         | 650          | 7%         | 26              | 4%        | 29                      | 8%        | 816               | 5%          |
| Perinatal          | 28           | 1%         | 115          | 1%         | 8               | 1%        | 9                       | 2%        | 160               | 1%          |
| Undetermined       | 599          | 12%        | 1,804        | 21%        | 119             | 19%       | 78                      | 22%       | 2,600             | 17%         |
| <i>PH-Male</i>     | 300          | 6%         | 948          | 11%        | 81              | 13%       | 42                      | 12%       | 1,371             | 9%          |
| <i>Unknown</i>     | 299          | 6%         | 856          | 10%        | 38              | 6%        | 36                      | 10%       | 1,229             | 8%          |
| <b>RACE TOTAL</b>  | <b>5,121</b> | <b>34%</b> | <b>8,794</b> | <b>59%</b> | <b>619</b>      | <b>4%</b> | <b>361</b>              | <b>2%</b> | <b>14,895</b>     | <b>100%</b> |

\*In the male subset all cases in the heterosexual category are HRH because the PH-Female category is not applicable to males and, likewise, in the female subset, all cases in the undetermined category are of unknown risk because the PH-Male category is not applicable to females.

**FIGURE 1. Mode of HIV Transmission Among Prevalent HIV/AIDS Cases by Race**



†The 'Other Known' category in Figure 1 is a combination of 'Blood Products' and 'Perinatal' from Table 3

**TABLE 4. Sex, Race, and Age at HIV Diagnosis Among Prevalent HIV/AIDS Cases**

| <b>MALES</b>      | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Male Subtotal</b> |             |
|-------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|----------------------|-------------|
| 0 - 12 years      | 25           | 1%         | 75           | 1%         | 2               | 0%        | 7                       | 3%        | 109                  | 1%          |
| 13 - 19 years     | 72           | 2%         | 415          | 7%         | 15              | 3%        | 11                      | 4%        | 513                  | 4%          |
| 20 - 24 years     | 419          | 9%         | 985          | 16%        | 53              | 11%       | 33                      | 13%       | 1,490                | 13%         |
| 25 - 29 years     | 728          | 16%        | 1,006        | 16%        | 94              | 20%       | 56                      | 21%       | 1,884                | 16%         |
| 30 - 39 years     | 1,748        | 39%        | 2,030        | 32%        | 194             | 40%       | 98                      | 37%       | 4,070                | 35%         |
| 40 - 49 years     | 1,062        | 24%        | 1,279        | 20%        | 83              | 17%       | 41                      | 16%       | 2,465                | 21%         |
| 50 - 59 years     | 334          | 7%         | 425          | 7%         | 29              | 6%        | 14                      | 5%        | 802                  | 7%          |
| 60 years and over | 89           | 2%         | 85           | 1%         | 12              | 2%        | 4                       | 2%        | 190                  | 2%          |
| <b>Total*</b>     | <b>4,477</b> | <b>39%</b> | <b>6,300</b> | <b>55%</b> | <b>482</b>      | <b>4%</b> | <b>264</b>              | <b>2%</b> | <b>11,523</b>        | <b>100%</b> |

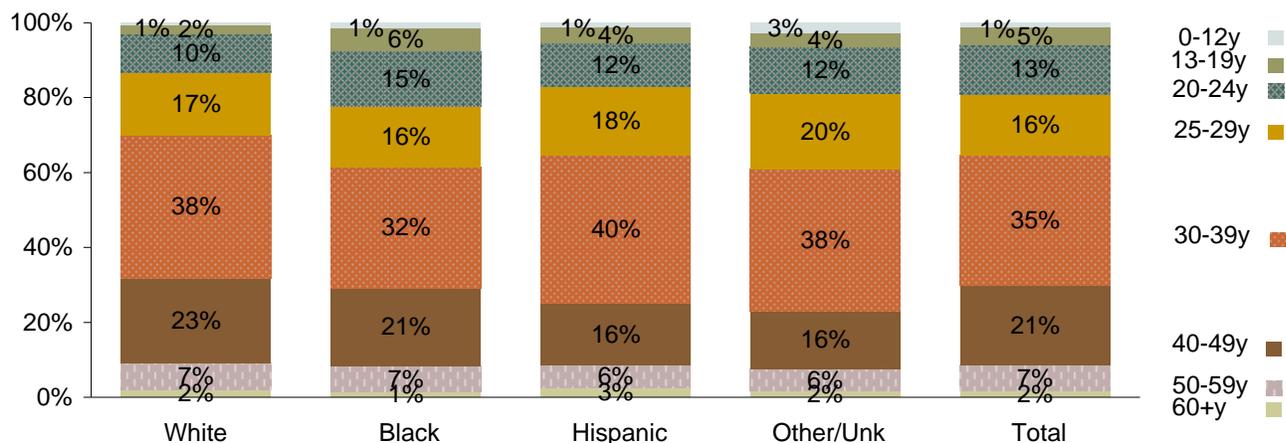
  

| <b>FEMALES</b>    | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Female Subtotal</b> |             |
|-------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|------------------------|-------------|
| 0 - 12 years      | 13           | 2%         | 53           | 2%         | 6               | 4%        | 3                       | 3%        | 75                     | 2%          |
| 13 - 19 years     | 41           | 6%         | 132          | 5%         | 11              | 8%        | 2                       | 2%        | 186                    | 6%          |
| 20 - 24 years     | 116          | 18%        | 312          | 13%        | 19              | 14%       | 12                      | 12%       | 459                    | 14%         |
| 25 - 29 years     | 126          | 20%        | 404          | 16%        | 19              | 14%       | 17                      | 18%       | 566                    | 17%         |
| 30 - 39 years     | 206          | 32%        | 821          | 33%        | 51              | 37%       | 39                      | 40%       | 1,117                  | 33%         |
| 40 - 49 years     | 93           | 14%        | 547          | 22%        | 19              | 14%       | 15                      | 15%       | 674                    | 20%         |
| 50 - 59 years     | 41           | 6%         | 185          | 7%         | 8               | 6%        | 7                       | 7%        | 241                    | 7%          |
| 60 years and over | 7            | 1%         | 38           | 2%         | 4               | 3%        | 2                       | 2%        | 51                     | 2%          |
| <b>Total*</b>     | <b>643</b>   | <b>19%</b> | <b>2,492</b> | <b>74%</b> | <b>137</b>      | <b>4%</b> | <b>97</b>               | <b>3%</b> | <b>3,369</b>           | <b>100%</b> |

| <b>TOTAL</b>        | <b>White</b> |            | <b>Black</b> |            | <b>Hispanic</b> |           | <b>Other or Unknown</b> |           | <b>Age Total</b> |             |
|---------------------|--------------|------------|--------------|------------|-----------------|-----------|-------------------------|-----------|------------------|-------------|
| 0 - 12 years        | 38           | 1%         | 128          | 1%         | 8               | 1%        | 10                      | 3%        | 184              | 1%          |
| 13 - 19 years       | 113          | 2%         | 547          | 6%         | 26              | 4%        | 13                      | 4%        | 699              | 5%          |
| 20 - 24 years       | 535          | 10%        | 1,297        | 15%        | 72              | 12%       | 45                      | 12%       | 1,949            | 13%         |
| 25 - 29 years       | 854          | 17%        | 1,410        | 16%        | 113             | 18%       | 73                      | 20%       | 2,450            | 16%         |
| 30 - 39 years       | 1,954        | 38%        | 2,851        | 32%        | 245             | 40%       | 137                     | 38%       | 5,187            | 35%         |
| 40 - 49 years       | 1,155        | 23%        | 1,826        | 21%        | 102             | 16%       | 56                      | 16%       | 3,139            | 21%         |
| 50 - 59 years       | 375          | 7%         | 610          | 7%         | 37              | 6%        | 21                      | 6%        | 1,043            | 7%          |
| 60 years and over   | 96           | 2%         | 123          | 1%         | 16              | 3%        | 6                       | 2%        | 241              | 2%          |
| <b>RACE TOTAL *</b> | <b>5,120</b> | <b>34%</b> | <b>8,792</b> | <b>59%</b> | <b>619</b>      | <b>4%</b> | <b>361</b>              | <b>2%</b> | <b>14,892</b>    | <b>100%</b> |

\*Not included in this table are one white female and two black male cases of unknown age at diagnosis

**FIGURE 2. Age at HIV Diagnosis Among Prevalent HIV/AIDS Cases by Race**

**TABLE 5. New Diagnoses, Deaths, and Prevalence of HIV/AIDS by Year**

| Year         | <i>HIV/AIDS</i>   |               |               | <i>AIDS</i>        |              |              |
|--------------|-------------------|---------------|---------------|--------------------|--------------|--------------|
|              | New HIV Diagnoses | Deaths        | Prevalence    | New AIDS Diagnoses | Deaths       | Prevalence   |
| 1981         | 4                 | 2             | 2             | 3                  | 2            | 1            |
| 1982         | 3                 | 0             | 5             | 2                  | 0            | 3            |
| 1983         | 28                | 5             | 28            | 22                 | 5            | 20           |
| 1984         | 70                | 17            | 81            | 50                 | 17           | 53           |
| 1985         | 382               | 63            | 400           | 98                 | 63           | 88           |
| 1986         | 489               | 102           | 787           | 168                | 99           | 157          |
| 1987         | 718               | 182           | 1,323         | 318                | 174          | 301          |
| 1988         | 904               | 263           | 1,964         | 493                | 254          | 540          |
| 1989         | 1,299             | 380           | 2,883         | 689                | 370          | 859          |
| 1990         | 1,441             | 453           | 3,871         | 795                | 433          | 1,221        |
| 1991         | 1,442             | 536           | 4,777         | 962                | 515          | 1,668        |
| 1992         | 1,492             | 662           | 5,607         | 1,231              | 630          | 2,269        |
| 1993         | 1,301             | 822           | 6,086         | 1,126              | 776          | 2,619        |
| 1994         | 1,210             | 899           | 6,397         | 1,013              | 842          | 2,790        |
| 1995         | 1,189             | 911           | 6,675         | 1,063              | 843          | 3,010        |
| 1996         | 1,121             | 632           | 7,164         | 857                | 583          | 3,284        |
| 1997         | 1,045             | 469           | 7,740         | 736                | 419          | 3,601        |
| 1998         | 903               | 398           | 8,245         | 649                | 350          | 3,900        |
| 1999         | 750               | 363           | 8,632         | 574                | 317          | 4,157        |
| 2000         | 921               | 379           | 9,174         | 650                | 328          | 4,479        |
| 2001         | 879               | 382           | 9,671         | 575                | 315          | 4,739        |
| 2002         | 768               | 299           | 10,140        | 578                | 270          | 5,047        |
| 2003         | 873               | 278           | 10,735        | 599                | 240          | 5,406        |
| 2004         | 887               | 270           | 11,352        | 560                | 224          | 5,742        |
| 2005         | 894               | 284           | 11,962        | 718                | 242          | 6,218        |
| 2006         | 812               | 251           | 12,523        | 620                | 209          | 6,629        |
| 2007         | 799               | 231           | 13,091        | 586                | 199          | 7,016        |
| 2008         | 783               | 199           | 13,675        | 543                | 180          | 7,379        |
| 2009         | 822               | 165           | 14,332        | 472                | 147          | 7,704        |
| 2010         | 660               | 97            | 14,895        | 434                | 89           | 8,049        |
| 2011         | 660               | 97            | <b>15,458</b> | 434                | 89           | <b>8,394</b> |
| <b>TOTAL</b> | <b>25,549</b>     | <b>10,091</b> |               | <b>17,618</b>      | <b>9,224</b> |              |

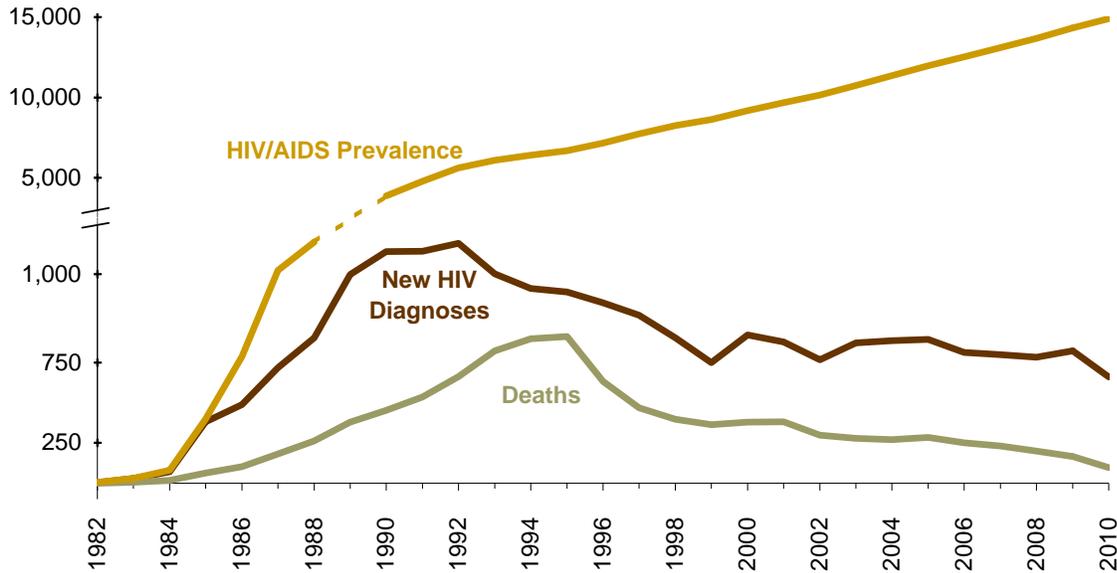
The prevalence of HIV in Michigan has steadily increased, since persons with HIV are living longer. This is largely due to improved anti-retroviral therapy.

The increase in HIV prevalence is also reflected in Figure 3 on page 6, which shows that the number of persons diagnosed, while stable for the last several years, is greater than the number of deaths each year. This directly contributes to the increase in prevalence. The current reported prevalence of HIV/AIDS in Michigan is 14,895. The prevalence of AIDS, which is a subset of HIV/AIDS prevalence, is 8,049.

As implied, the HIV/AIDS section displays data on all persons with HIV, including those with AIDS, as well as those who have not been diagnosed with AIDS. Thus, persons represented in the AIDS section are also represented in the HIV/AIDS section. The number of reported deaths includes deaths directly attributable to presence of HIV/AIDS as well as deaths due to other causes.

NOTE: Reporting for recent years may not be complete. Data are not adjusted to account for reporting delays.

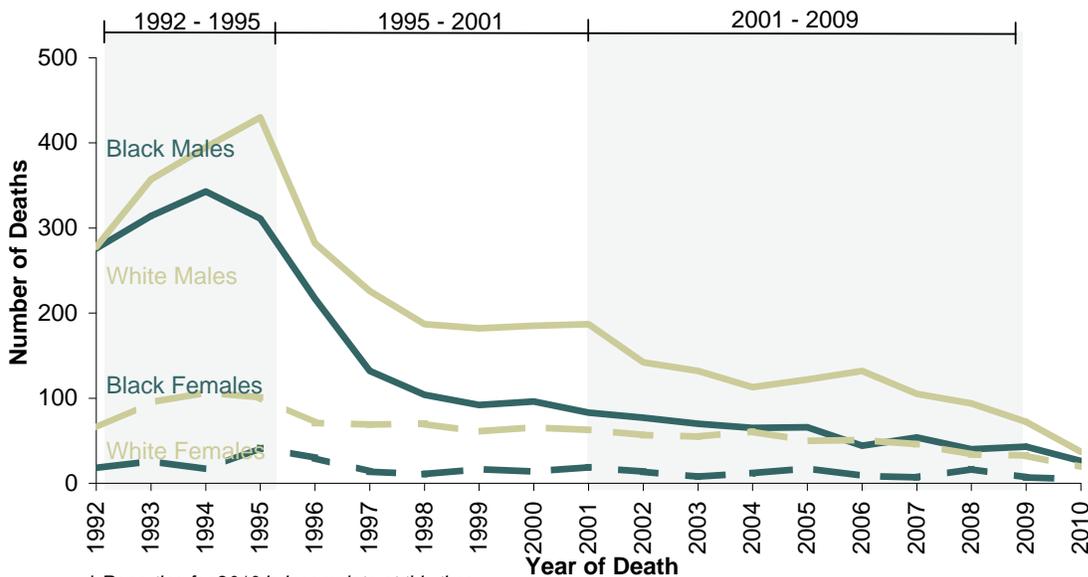
**FIGURE 3. New Diagnoses<sup>†</sup>, Deaths, and Prevalence of HIV/AIDS by Year**



<sup>†</sup> Reporting for 2010 is incomplete at this time.

Figure 4 (below) shows the number of HIV-infected Michigan residents who have been reported as deceased by a local health department, the department of vital records via a data match or death certificate, or an alternate source. The number of deaths increased in all race/sex groups from the beginning of the epidemic through approximately 1994-1995. The number of deaths decreased markedly between 1995 and 1998 and then were relatively stable until 2001. It should be noted that the percent decrease in deaths among white males (73%) between 1995 and 2001 was more pronounced than the percent decrease among black males (57%), and the percent decrease among white females (55%) was larger than the percent decrease among black females (38%). Encouragingly, the number of deaths in black males has fallen substantially from 2001 to 2009 (61%), as have the number of deaths in white males (48%), black females (48%) and white females (63%).

**FIGURE 4. HIV/AIDS Deaths<sup>†</sup> by Race/Sex**



<sup>†</sup> Reporting for 2010 is incomplete at this time.

TABLE 6. Demographic Information on Persons Ever Diagnosed\* with HIV

| RACE/ETHNICITY                                    | 2011 <sup>†</sup> |              |            |              |            |               | CUMULATIVE (through 2011) |              |              |              |               |               |
|---|-------------------|--------------|------------|--------------|------------|---------------|---------------------------|--------------|--------------|--------------|---------------|---------------|
|   | Male              |              | Female     |              | Total      |               | Male                      |              | Female       |              | Total         |               |
| White   | 184               | (35%)        | 21         | (16%)        | 205        | (31%)         | 7,860                     | (40%)        | 985          | (19%)        | 8,845         | (36%)         |
| Black   | 305               | (58%)        | 100        | (77%)        | 405        | (61%)         | 10,761                    | (55%)        | 3,850        | (75%)        | 14,611        | (59%)         |
| Hispanic  | 31                | (6%)         | 6          | (5%)         | 37         | (6%)          | 730                       | (4%)         | 187          | (4%)         | 917           | (4%)          |
| Asian/HI/PI                                       | 1                 | (0%)         | 0          | (0%)         | 1          | (0%)          | 64                        | (0%)         | 23           | (0%)         | 87            | (0%)          |
| Am In/AK Nat                                      | 1                 | (0%)         | 1          | (1%)         | 2          | (0%)          | 46                        | (0%)         | 15           | (0%)         | 61            | (0%)          |
| Multi/Unk   | 8                 | (2%)         | 2          | (2%)         | 10         | (2%)          | 275                       | (1%)         | 93           | (2%)         | 368           | (1%)          |
| <b>RISK<sup>§</sup></b>                           |                   |              |            |              |            |               |                           |              |              |              |               |               |
| Male-Male Sex                                     | 300               | (57%)        | N/A        | --           | 300        | (45%)         | 11,617                    | (59%)        | N/A          | --           | 11,617        | (47%)         |
| Injection Drug Use                                | 14                | (3%)         | 19         | (15%)        | 33         | (5%)          | 2,688                     | (14%)        | 1,575        | (31%)        | 4,263         | (17%)         |
| MSM/IDU   | 5                 | (1%)         | N/A        | --           | 5          | (1%)          | 1,346                     | (7%)         | N/A          | --           | 1,346         | (5%)          |
| Blood Products                                    | 0                 | (0%)         | 0          | (0%)         | 0          | (0%)          | 306                       | (2%)         | 38           | (1%)         | 344           | (1%)          |
| Heterosexual                                      | 9                 | (2%)         | 77         | (59%)        | 86         | (13%)         | 789                       | (4%)         | 2,775        | (54%)        | 3,564         | (14%)         |
| HRH   | 9                 | (2%)         | 18         | (14%)        | 27         | (4%)          | 789                       | (4%)         | 1,812        | (35%)        | 2,601         | (10%)         |
| PH-Female   | N/A               | --           | 59         | (45%)        | 59         | (9%)          | N/A                       | --           | 963          | (19%)        | 963           | (4%)          |
| Perinatal   | 3                 | (1%)         | 1          | (1%)         | 4          | (1%)          | 133                       | (1%)         | 100          | (2%)         | 233           | (1%)          |
| Undetermined                                      | 199               | (38%)        | 33         | (25%)        | 232        | (35%)         | 2,857                     | (14%)        | 665          | (13%)        | 3,522         | (14%)         |
| PH-Male   | 98                | (18%)        | N/A        | --           | 98         | (15%)         | 1,831                     | (9%)         | N/A          | --           | 1,831         | (7%)          |
| Unknown   | 101               | (19%)        | 33         | (25%)        | 134        | (20%)         | 1,026                     | (5%)         | 665          | (13%)        | 1,691         | (7%)          |
| <b>AGE AT HIV DIAGNOSIS</b>                       |                   |              |            |              |            |               |                           |              |              |              |               |               |
| 0 - 12 years                                      | 3                 | (1%)         | 1          | (1%)         | 4          | (1%)          | 177                       | (1%)         | 106          | (2%)         | 283           | (1%)          |
| 13 - 19 years                                     | 39                | (7%)         | 8          | (6%)         | 47         | (7%)          | 599                       | (3%)         | 221          | (4%)         | 820           | (3%)          |
| 20 - 24 years                                     | 112               | (21%)        | 16         | (12%)        | 128        | (19%)         | 1,927                     | (10%)        | 565          | (11%)        | 2,492         | (10%)         |
| 25 - 29 years                                     | 77                | (15%)        | 24         | (18%)        | 101        | (15%)         | 3,139                     | (16%)        | 789          | (15%)        | 3,928         | (16%)         |
| 30 - 39 years                                     | 131               | (25%)        | 32         | (25%)        | 163        | (25%)         | 7,316                     | (37%)        | 1,796        | (35%)        | 9,112         | (37%)         |
| 40 - 49 years                                     | 94                | (18%)        | 31         | (24%)        | 125        | (19%)         | 4,567                     | (23%)        | 1,154        | (22%)        | 5,721         | (23%)         |
| 50 - 59 years                                     | 57                | (11%)        | 12         | (9%)         | 69         | (10%)         | 1,556                     | (8%)         | 402          | (8%)         | 1,958         | (8%)          |
| 60 years and over                                 | 17                | (3%)         | 6          | (5%)         | 23         | (3%)          | 453                       | (2%)         | 119          | (2%)         | 572           | (2%)          |
| Unspecified                                       | 0                 | (0%)         | 0          | (0%)         | 0          | (0%)          | 2                         | (0%)         | 1            | (0%)         | 3             | (0%)          |
| <b>DISEASE STATUS<sup>¶</sup></b>                 |                   |              |            |              |            |               |                           |              |              |              |               |               |
| HIV, not AIDS                                     | 362               | (68%)        | 100        | (77%)        | 462        | (70%)         | 5,780                     | (29%)        | 1,925        | (37%)        | 7,705         | (31%)         |
| AIDS - Same time                                  | 124               | (23%)        | 19         | (15%)        | 143        | (22%)         | 7,529                     | (38%)        | 1,462        | (28%)        | 8,991         | (36%)         |
| AIDS - Short lag                                  | 44                | (8%)         | 11         | (8%)         | 55         | (8%)          | 1,513                     | (8%)         | 419          | (8%)         | 1,932         | (8%)          |
| AIDS - Long lag                                   | 0                 | (0%)         | 0          | (0%)         | 0          | (0%)          | 4,914                     | (25%)        | 1,347        | (26%)        | 6,261         | (25%)         |
| <b>AREA OF RESIDENCE AT DIAGNOSIS<sup>§</sup></b> |                   |              |            |              |            |               |                           |              |              |              |               |               |
| Detroit Metro                                     | 356               | (67%)        | 92         | (71%)        | 448        | (68%)         | 13,005                    | (66%)        | 3,730        | (72%)        | 16,735        | (67%)         |
| Out-State   | 166               | (31%)        | 38         | (29%)        | 204        | (31%)         | 5,633                     | (29%)        | 1,319        | (26%)        | 6,952         | (28%)         |
| Prison/Unknown                                    | 8                 | (2%)         | 0          | (0%)         | 8          | (1%)          | 1,098                     | (6%)         | 104          | (2%)         | 1,202         | (5%)          |
| <b>TOTAL</b>                                      | <b>530</b>        | <b>(80%)</b> | <b>130</b> | <b>(20%)</b> | <b>660</b> | <b>(100%)</b> | <b>19,736</b>             | <b>(79%)</b> | <b>5,153</b> | <b>(21%)</b> | <b>24,889</b> | <b>(100%)</b> |

\*Includes deceased cases

†Data for cases diagnosed in 2011 may be incomplete at this time

§ See page ii for description of risk category groupings. Risk categories used in Michigan are newly defined as of the July 2007 quarter.

¶ The definitions of disease status are as follows:

HIV, not AIDS = Has not been diagnosed with AIDS

AIDS - Same time = Concurrent HIV and AIDS diagnoses (diagnoses within the same month)

AIDS - Short lag = AIDS diagnosed 1 month to 12 months after HIV diagnosis

AIDS - Long lag = AIDS diagnosed more than 12 months after HIV diagnosis

§ Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area.

NOTE: &lt;5 and \*\* = 1, 2, 3, or 4 cases

TABLE 7. Prevalent HIV/AIDS Cases According to County of Residence at Diagnosis

| COUNTY         | EST<br>PREV<br>Number | REPORTED PREVALENCE |      |       |       | CENSUS<br>2008 EST | COUNTY                           | EST<br>PREV<br>Number | REPORTED PREVALENCE |              |               |            | CENSUS<br>2008 EST |
|----------------|-----------------------|---------------------|------|-------|-------|--------------------|----------------------------------|-----------------------|---------------------|--------------|---------------|------------|--------------------|
|                |                       | HIV, Not<br>AIDS    | AIDS | Total | Rate* |                    |                                  |                       | HIV, Not<br>AIDS    | AIDS         | Total         | Rate*      |                    |
| Alcona         | 10                    | 0                   | 0    | 0     | 0     | 11,556             | Livingston                       | 60                    | 19                  | 30           | 49            | 27         | 182,575            |
| Alger          | 10                    | 0                   | 1    | 1     | 11    | 9,438              | Luce                             | 10                    | 0                   | 0            | 0             | 0          | 6,614              |
| Allegan        | 100                   | 26                  | 48   | 74    | 66    | 112,975            | Mackinac                         | 10                    | 2                   | 2            | 4             | 38         | 10,624             |
| Alpena         | 10                    | 1                   | 2    | 3     | 10    | 29,520             | Macomb                           | 850                   | 309                 | 330          | 639           | 77         | 830,663            |
| Antrim         | 10                    | 4                   | 7    | 11    | 46    | 24,109             | Manistee                         | 20                    | 6                   | 7            | 13            | 53         | 24,640             |
| Arenac         | 10                    | 1                   | 1    | 2     | 12    | 16,361             | Marquette                        | 20                    | 8                   | 9            | 17            | 26         | 65,492             |
| Baraga         | 10                    | 1                   | 4    | 5     | 59    | 8,528              | Mason                            | 10                    | 3                   | 6            | 9             | 31         | 28,782             |
| Barry          | 30                    | 9                   | 15   | 24    | 41    | 58,890             | Mecosta                          | 20                    | 10                  | 5            | 15            | 36         | 41,562             |
| Bay            | 90                    | 36                  | 29   | 65    | 60    | 107,495            | Menominee                        | 10                    | 3                   | 1            | 4             | 17         | 24,202             |
| Benzie         | 10                    | 2                   | 3    | 5     | 29    | 17,396             | Midland                          | 30                    | 12                  | 14           | 26            | 31         | 82,605             |
| Berrien        | 300                   | 89                  | 140  | 229   | 144   | 159,481            | Missaukee                        | 10                    | 4                   | 2            | 6             | 40         | 15,001             |
| Branch         | 20                    | 12                  | 3    | 15    | 33    | 45,726             | Monroe                           | 90                    | 25                  | 41           | 66            | 43         | 152,949            |
| Calhoun        | 160                   | 56                  | 64   | 120   | 88    | 135,861            | Montcalm                         | 30                    | 7                   | 14           | 21            | 33         | 62,971             |
| Cass           | 40                    | 15                  | 15   | 30    | 60    | 50,185             | Montmorency                      | 10                    | 0                   | 3            | 3             | 29         | 10,335             |
| Charlevoix     | 20                    | 5                   | 8    | 13    | 50    | 25,936             | Muskegon                         | 160                   | 62                  | 55           | 117           | 67         | 174,344            |
| Cheboygan      | 10                    | 2                   | 6    | 8     | 30    | 26,354             | Newaygo                          | 20                    | 7                   | 10           | 17            | 35         | 48,897             |
| Chippewa       | 10                    | 6                   | 3    | 9     | 23    | 38,971             | Oakland                          | 2,220                 | 810                 | 865          | 1,675         | 139        | 1,202,174          |
| Clare          | 20                    | 5                   | 8    | 13    | 43    | 30,312             | Oceana                           | 10                    | 7                   | 4            | 11            | 40         | 27,598             |
| Clinton        | 40                    | 19                  | 13   | 32    | 46    | 69,726             | Ogemaw                           | 10                    | 1                   | 3            | 4             | 19         | 21,016             |
| Crawford       | 10                    | 0                   | 3    | 3     | 21    | 14,463             | Ontonagon                        | 10                    | 1                   | 2            | 3             | 44         | 6,819              |
| Delta          | 20                    | 5                   | 8    | 13    | 35    | 37,179             | Osceola                          | 10                    | 2                   | 3            | 5             | 22         | 22,930             |
| Dickinson      | 10                    | 0                   | 1    | 1     | 4     | 26,812             | Oscoda                           | 10                    | 1                   | 0            | 1             | 11         | 8,836              |
| Eaton          | 70                    | 24                  | 28   | 52    | 49    | 106,781            | Otsego                           | 10                    | 4                   | 7            | 11            | 46         | 23,808             |
| Emmet          | 10                    | 3                   | 6    | 9     | 27    | 33,535             | Ottawa                           | 150                   | 48                  | 62           | 110           | 42         | 260,364            |
| Genesee        | 700                   | 271                 | 254  | 525   | 122   | 428,790            | Presque Isle                     | 10                    | 0                   | 2            | 2             | 15         | 13,650             |
| Gladwin        | 10                    | 3                   | 5    | 8     | 31    | 25,920             | Roscommon                        | 10                    | 3                   | 8            | 11            | 44         | 25,042             |
| Gogebic        | 10                    | 1                   | 1    | 2     | 12    | 16,043             | Saginaw                          | 260                   | 104                 | 94           | 198           | 99         | 200,745            |
| Grand Traverse | 80                    | 31                  | 29   | 60    | 70    | 86,071             | Sanilac                          | 20                    | 6                   | 7            | 13            | 30         | 43,024             |
| Gratiot        | 10                    | 3                   | 4    | 7     | 17    | 42,245             | Schoolcraft                      | 10                    | 1                   | 0            | 1             | 12         | 8,220              |
| Hillsdale      | 10                    | 4                   | 4    | 8     | 17    | 46,212             | Shiawassee                       | 30                    | 9                   | 15           | 24            | 34         | 70,880             |
| Houghton       | 10                    | 3                   | 3    | 6     | 17    | 35,174             | St. Clair                        | 120                   | 48                  | 44           | 92            | 54         | 168,894            |
| Huron          | 10                    | 2                   | 2    | 4     | 12    | 32,805             | St. Joseph                       | 40                    | 13                  | 19           | 32            | 51         | 62,232             |
| Ingham         | 580                   | 235                 | 205  | 440   | 159   | 277,528            | Tuscola                          | 10                    | 4                   | 5            | 9             | 16         | 56,187             |
| Ionia          | 30                    | 8                   | 11   | 19    | 30    | 63,833             | Van Buren                        | 60                    | 18                  | 25           | 43            | 55         | 77,801             |
| Iosco          | 10                    | 3                   | 1    | 4     | 15    | 25,932             | Washtenaw                        | 620                   | 230                 | 240          | 470           | 135        | 347,376            |
| Iron           | 10                    | 0                   | 1    | 1     | 8     | 12,001             | Wayne Total                      | 9,540                 | 3,170               | 4,023        | 7,193         | 369        | 1,949,929          |
| Isabella       | 50                    | 19                  | 16   | 35    | 52    | 66,778             | Wayne, excl. Detroit             | 1,980                 | 642                 | 852          | 1,494         | 144        | 1,037,867          |
| Jackson        | 180                   | 65                  | 71   | 136   | 85    | 160,180            | Detroit                          | 7,560                 | 2,528               | 3,171        | 5,699         | 625        | 912,062            |
| Kalamazoo      | 380                   | 147                 | 143  | 290   | 118   | 245,912            | Wexford                          | 10                    | 3                   | 5            | 8             | 25         | 31,673             |
| Kalkaska       | 10                    | 4                   | 0    | 4     | 23    | 17,066             |                                  |                       |                     |              |               |            |                    |
| Kent           | 1,070                 | 352                 | 454  | 806   | 133   | 605,213            | <b>Detroit Metro<sup>†</sup></b> | <b>12,850</b>         | <b>4,376</b>        | <b>5,320</b> | <b>9,696</b>  | <b>221</b> | <b>4,395,484</b>   |
| Keweenaw       | 10                    | 0                   | 0    | 0     | 0     | 2,202              | <b>Out-State<sup>†</sup></b>     | <b>5,850</b>          | <b>2,094</b>        | <b>2,320</b> | <b>4,414</b>  | <b>79</b>  | <b>5,607,938</b>   |
| Lake           | 10                    | 3                   | 8    | 11    | 100   | 11,014             |                                  |                       |                     |              |               |            |                    |
| Lapeer         | 40                    | 14                  | 17   | 31    | 34    | 90,875             | <b>Prisons<sup>‡</sup></b>       | <b>790</b>            | <b>374</b>          | <b>408</b>   | <b>782</b>    | <b>N/A</b> | <b>N/A</b>         |
| Leelanau       | 10                    | 0                   | 6    | 6     | 28    | 21,783             | <b>Unknown</b>                   | <b>10</b>             | <b>2</b>            | <b>1</b>     | <b>3</b>      | <b>N/A</b> | <b>N/A</b>         |
| Lenawee        | 60                    | 21                  | 27   | 48    | 48    | 100,801            | <b>TOTAL</b>                     | <b>19,500</b>         | <b>6,846</b>        | <b>8,049</b> | <b>14,895</b> | <b>149</b> | <b>10,003,422</b>  |

\*Rate is reported prevalence per 100,000 and is not an estimate

<sup>†</sup> Detroit Metro Area consists of Oakland, Monroe, Lapeer, Macomb, St. Clair, and Wayne Counties. The remaining counties comprise the Out-State area.<sup>‡</sup>The Prevalence Estimate for prisons is calculated differently from the remainder of the state. Please see the Front Matter (p. iii) for a further explanation.



**TABLE 8. Perinatal HIV Exposures by Year of Birth, 2005 - 2011**

|                                      | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011 <sup>†</sup> |
|--------------------------------------|--------|--------|--------|--------|--------|--------|-------------------|
| <b>NUMBER DELIVERIES/BIRTHS</b>      |        |        |        |        |        |        |                   |
| Infants                              | 57     | 72     | 50     | 54     | 39     | 34     | 25                |
| Mothers                              | 53     | 66     | 48     | 47     | 38     | 29     | 15                |
| <b>RESIDENCE AT BIRTH</b>            |        |        |        |        |        |        |                   |
| Southeast Michigan                   | 37 65% | 42 58% | 30 60% | 35 65% | 28 72% | 21 62% | 14 56%            |
| Out-State Michigan                   | 20 35% | 30 42% | 20 40% | 19 35% | 11 28% | 13 38% | 11 44%            |
| <b>INFANTS' RACE</b>                 |        |        |        |        |        |        |                   |
| White, Non-Hispanic                  | 9 16%  | 9 13%  | 6 12%  | 6 11%  | 8 21%  | 8 24%  | 1 4%              |
| Black, Non-Hispanic                  | 45 79% | 58 81% | 35 70% | 42 78% | 27 69% | 23 68% | 17 68%            |
| Other                                | 3 5%   | 5 7%   | 9 18%  | 6 11%  | 4 10%  | 3 9%   | 7 28%             |
| <b>MOTHERS' MODE OF TRANSMISSION</b> |        |        |        |        |        |        |                   |
| Injecting Drug Use                   | 3 6%   | 7 11%  | 2 4%   | 2 4%   | 1 3%   | 6 21%  | 0 0%              |
| High Risk Heterosexual               | 15 28% | 32 48% | 18 38% | 16 34% | 8 21%  | 10 34% | 9 60%             |
| Undetermined                         | 35 66% | 27 41% | 28 58% | 29 62% | 29 76% | 13 45% | 6 40%             |

<sup>†</sup> Reporting for 2011 is incomplete at this time.

Table 8 displays the characteristics of all infants born to HIV positive women as well as characteristics of their mothers. Figure 6 indicates the current infection status of these infants -- the bottom portion of the bars showing number confirmed to be infected with HIV and/or diagnosed with AIDS; the middle portion showing those not to be infected with HIV or AIDS through laboratory testing or physician exam; and the top portion showing the number whose HIV infection status is unknown due to loss to follow up or infection status reporting delay.

Since 1994, the CDC and other organizations involved in perinatal HIV transmission have recommended that HIV-positive pregnant women receive doses of zidovudine (ZDV or AZT) prenatally and at labor and delivery and that children born to these women receive ZDV neonatally. Despite these recommendations, only 57% of births to HIV-positive women are documented by MDCH to have received all three arms of therapy. For more information, please see the annual Missed Opportunity report, which can be found at: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_2982\\_46000\\_46003-166892--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2982_46000_46003-166892--,00.html)

**FIGURE 6. Infection Status of Perinatal HIV Exposures, 2005 - 2011**